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09/828,718	04/05/2001	Joseph Leo Nothnagel	71029	5597

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EXAMINER
YOON, TAE H

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1714	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-4

Office Action Summary	Application No. 09/828,718	Applicant(s) Nothnagel et al
	Examiner T. Yoon	Group Art Unit 1714

—The MAILING DATE of this communication appears on th cover sheet beneath the correspondence address—

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-27 is/are pending in the application.

Of the above claim(s) 11-22 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-10 and 23-27 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Atta hment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of Referenc (s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing R vi w, PTO-948

☐ Int rview Summary, PTO-413

☐ Notice of Informal Pat nt Application, PTO-152

☐ Other _____

Office Action Summary

DETAILED ACTION

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-10 and 23-27, drawn to a polymeric vehicle, classified in class 525, subclass 123+.

II. Claims 11-22, drawn to a polymeric vehicle, classified in class 525, subclass 395+.

The inventions are distinct, each from the other because of the following reasons: Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination also uses polymers other than polyesters. The subcombination has separate utility such as a coating.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Krueger on April 11, 2002 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-10 and 23-27. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 11-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 10 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 5, 10 and 27, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the

explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims recites the broad recitation cycloalkylene diisocyanates, and the claim also recites such as 1, 3-clclopentane-diisocyanate ---- which is the narrower statement of the range/limitation.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4-6, 9, 10, 23 and 26-27 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Janischewski et al (US 6,048,926).

Janischewski et al a composition comprising an aqueous dispersion of at least one organic polyhydroxy compound and a diisocyanate in abstract, examples and claims. Colloidal dispersion having a particle size of 10-100 nm and various binders such as addition polymers and condensation polymers having an acid number of 20-100 are taught at col. 4, lines 13-52. Neutralization of carboxyl groups, a solid content of 15-55% by weight and an organic solvent content of less than 1%by weight are taught at col. 5, lines 1-50. Also, coating composition having the solid content of 35-60% by weight and a viscosity of 0.1 to 10 poise (1 poise = 100 mPa.s) are taught at col. 7, lines 1-11.

Thus, the instant invention lacks novelty.

Claims 1-10 and 23-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Higashiura et al (US 5,449,707).

Higashiura et al teach an aqueous dispersion comprising a neutralized graft-copolymer having an acid value of 600-4000 eq./10^6 g at col. 5, lines 40-57. The acrylic modified polyester of Higashiura meets the instant hybrid polymer. A co-inventor, Mr. Coad, stated that the total

acid value of 600-4000 eq./10^6g taught by Higashiura at col. 5, lines 48-50 equals an acid value of 34-244 during the interview held on August 24, 2000. The removal of solvents (col. 9, lines 16-18 and example 1) and the solid contents of 20-60% by weight (col. 9, lines19-21) are taught. Tables 2-4 show the instant viscosity (1 cps = 0.01 poise) and particle sizes. Higashiura et al also teach employing curing agents such as various isocyanate compounds at col. 11, lines 1-13 and 52 to col. 12, line 21. Thus, the instant invention lacks novelty.

Claims 1-10 and 23-27 are rejected under 35 U.S.C. 103(a) as obvious over Antonelli et al (US 6,107,392) or Buter et al (US 5,494,980) in view of Higashiura et al (US 5,449,707) or Janischewski et al (US 6,048,926)..

Buter et al teach water-dispersible hybrid polymers having an acid number of 30-120, and a dispersion thereof having 40 weight percent concentration, a particle size of 100 nm or less and low viscosity at col. 1, lines 43-56. Table 1 shows viscosities of 0.4 to 2.5 pa.s (4 to 25 poise) for the neutralized polymers. The use of curing agents such as blocked isocyanate and adducts of a polyisocyanate and a hydrocarboxylic acid is taught at col. 6, lines 41-46. Example XII shows an aqueous dispersion having about 3.5% of an organic solvent.

Antonelli et al teach an aqueous coating composition comprising a neutralized graft-copolymer having an acid value of 10-70 (col. 8, lines 22-25) and a particle size of 20-400 nm (col. 4, line 55). Examples show various solid contents (55% in example 2 and 40% in example 14) and Gardner viscosities, and said Gardner viscosities inherently meet the instant viscosity.

Antonelli et al also teach employing curing agents such as various isocyanate compounds at col. 9, lines 1-4. Antonelli et al also teach that an aqueous carrier comprising at least 50% by weight of water in claim 1.

The instant invention further recites the content of an organic solvent and particular isocyanates over Buter et al and Antonelli et al.

However, the use of coating composition having no or little amount of an organic solvent due to an environmental and health concerns is well known as taught by Higashiura et al and Janischewski et al. Higashiura et al also teach the instant isocyanates.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize a composition having less than 2% by weight of an organic solvent in Buter et al or Antonelli et al with teaching of Higashiura et al or Janischewski et al since the use of coating composition having no or little amount of an organic solvent due to an environmental and health concerns is well known, and further to utilize various isocyanates of Higashiura et al in Buter et al or Antonelli et al since Buter et al or Antonelli et al teach various isocyanates and since the use of instant isocyanates as curing agents is routine in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

THY/April 19, 2002

TAE H. YOON
PRIMARY EXAMINER